

To achieve a cesarean delivery, the surgeon must traverse all the layers that separate him/her from the fetus. First, the skin is incised, followed by the subcutaneous tissues. The next layer is the fascia overlying the rectus abdominis muscles. The anterior abdominal fascia usually consists of two layers. One is composed of aponeurosis from the external oblique rectus muscle, and the other is a fused layer that contains the aponeuroses of the transverse abdominis and internal oblique muscles. After separating the rectus muscles, which run from cephalad to caudal, the surgeon enters the abdominal cavity through the parietal peritoneum. In a gravid woman, unlike in a nongravid patient, the uterus is often encountered at this point immediately upon entry into the abdomen. If the patient has an adhesive disease from prior surgeries, the surgeon may encounter adhesions involving such structures as the omentum, the bowel, the anterior abdominal wall, the bladder, and the anterior aspect of the uterus. Upon identifying the uterus, the surgeon can then identify the vesicouterine peritoneum, or vesicouterine serosa, that connects the bladder and the uterus. If the surgeon desires to make a bladder flap, he or she must incise the vesicouterine peritoneum. In a patient with prior cesarean sections, the bladder may become difficult to separate from the uterus. The uterus consists of the serosal outer layer (perimetrium), the muscle layer (myometrium), and the inside mucosal layer (endometrium). All three of these layers are incised to make the uterine incision or hysterotomy. It is important to recall that the uterine vessels run along with the lateral aspects of the uterus on both sides, and care must be taken to avoid damaging these blood vessels when the uterine incision is either made or extended — the uterine arteries branch from the anterior division of the internal iliac artery. The blood flow through these arteries is eight times faster during pregnancy, with a unilateral flow of over 300 milliliters per minute at 36 weeks.[4] The uterine arteries cross the ureters anteriorly and enter the uterus at the cardinal ligament. The uterine arteries anastomose in the broad ligament with the ovarian arteries, which arise from the abdominal aorta. Depending on the status of the patient's amniotic membranes (if her "water is broken" or intact), the surgeon could encounter that amniotic sac upon incision of the uterus. The amniotic sac consists of two layers, the chorion, and the amnion, which fuse early in pregnancy. The amniotic sac, if present, would be the last layer between the surgeon and the fetus. It is at this point that the fetus is delivered, achieving the primary goal of the cesarean section. The gravid uterus often obscures the remainder of the female reproductive anatomy. However, after delivery of the fetus, other structures may become visible, which is especially the case if the surgeon exteriorizes the uterus for repair. The surgeon may appreciate the Fallopian tubes and ovaries, and performing a tubal ligation is possible if the patient has previously expressed a desire and has given informed consent for this form of contraception. The broad ligament is also identifiable. This structure consists of two leaves of the peritoneum and attaches the uterus to the pelvic sidewalls. The medial leaf of the broad ligament, if opened, is also where one may find the ureter coursing. The cervix, located at the lower portion of the uterus, is not routinely visible, nor .is the vagina